

ABSTRACT OF THE DISCLOSURE

After forming a hole in an insulating film, a first tungsten film is formed over the wall and bottom surfaces of the hole. Then, a second tungsten film is formed by using the first tungsten film as a seed layer to fill up the hole. When the first tungsten film is formed, 5 the average value of the diameters of crystal grains of the portion of the first tungsten film which is formed on the bottom surface of the hole is suppressed to 30 nm or less.